

AT&T Server Family



September 1995



*Bringing computing and communications
together to help you get, move,
and use information.*

AT&T Global Information Solutions Server Family

As businesses move their business critical processing away from the traditional mainframe and consolidate thousands of desktop systems and LANs onto OPEN distributed server platforms, they also require exceptional performance, price/performance, investment protection and availability. The AT&T server family, including the new **WorldMark™** enterprise server systems, is a leader in ALL these categories.

Open computing enterprise solutions

The AT&T Global Information Solutions server family provides the broadest range of open, scalable systems in the industry. AT&T servers provide superior high availability and high reliability enterprise computing features to open computing environments. Over the years, AT&T servers have provided proven solutions for the most demanding enterprise computing needs – we've installed thousands of enterprise-level systems worldwide.

Broadest range of scalable, flexible open enterprise servers

All AT&T servers are based on Intel® microprocessors – from the Globalyst™ LAN servers through our **WorldMark**, Massively Parallel Processing (MPP) decision support systems – giving you unmatched flexibility to grow your computing capabilities as your business grows. AT&T servers can be configured to deliver exactly the power you need at the price you want, with full confidence that you'll never outgrow capacity.

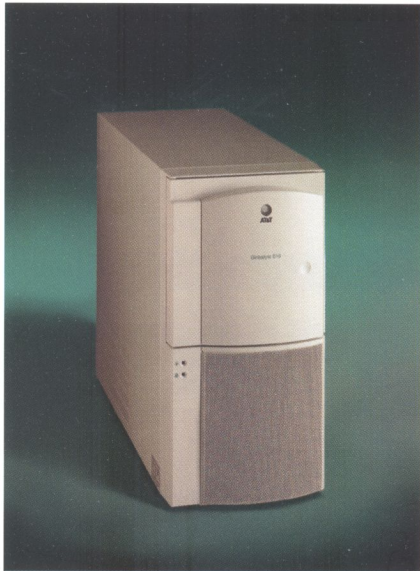
Investment protection and exceptional price/performance

AT&T Global Information Solutions servers are designed to protect your initial investment, and grow as your business grows. All our servers are designed for quick and easy processor, storage, and memory growth, making expandability fast and simple. All of this is provided at exceptional price/performance ... AT&T servers are regularly rated first in their class in Transaction Processing Council (TPC) benchmarks.

Full range of support and consulting services

AT&T Global Information Solutions delivers a full continuum of innovative, global system support and consulting services through a worldwide delivery team of over 19,000 people. With over 10 years of expertise in integrating, implementing and supporting open systems, the AT&T Global Information Solutions service organization provides the technical expertise, global infrastructure, tools and methodologies to provide a premium level of service for business critical and mission critical environments.

AT&T Globalyst™ S10 Server



The AT&T Globalyst S10 sets new standards for value in the LAN file and print server industry. Superior system performance, scalability, and support for industry-standard software and hardware allow the Globalyst S10 to meet the needs of environments requiring file/print applications, e-mail and fax applications, small LAN database packages, and small branch processing applications.

The Globalyst S10 offers superior scalability by supporting 60, 75, and 90 MHz Intel Pentium® processors and up to 128 MB Error Checking and Correcting (ECC) or Parity memory using industry-standard SIMM technology. Seven drive bays and seven bus mastering I/O slots (4 EISA, 2 PCI, and 1 shared) provide additional scalability and flexibility within the system. A well-designed PCI/EISA architecture offers exceptional bandwidth, integration, and performance levels and enables peripherals to take full advantage of Intel processor power.

AT&T created the Globalyst S10 with advanced applications and software that allow integrated personal computing and communications (PC&C) solutions through voice and data, simultaneous file and application-sharing abilities, call control features, file-management tracking, and network resource mapping. In addition, the Globalyst S10 features an advanced set of server management software applications that can be used independently or integrated for customized server management functions including fault resilience, performance tuning, monitoring and analysis capabilities. Additional options such as ECC memory and RAID levels 0, 1, and 5 further ensure maximum data integrity.

The AT&T Globalyst S10 provides customers with true flexibility by supporting industry-standard operating systems such as Novell NetWare and UnixWare, Microsoft® Windows NT™ Server, SCO UNIX, and IBM OS/2, in addition to AT&T UNIX SVR4 MP-RAS.

Computing and Communications

Provides integrated set of advanced voice and data network communication software

Effective Server Management

Integrated software applications maximize network uptime providing advanced fault resilience

PCI/EISA Architecture

For higher bandwidth, higher integration, and maximum peripheral performance

Open Systems Compatibility

Support for industry-standard hardware and software

Exceptional Performance

Intel processor power, PCI and EISA, Fast and Wide SCSI-2

Reliability and Availability

ECC memory, RAID levels 0, 1, and 5 ensure system uptime

Aggressive Pricing

Exceptional performance, priced competitively

Features

Benefits

PCI/EISA architecture

Provides exceptional bandwidth and performance

256 KB direct-mapped write-back cache optimized for multiple applications, upgradeable to 1 MB

Fast I/O response times

PC&C Software

Provides advanced networking software, including AT&T's Passageway Telephony Services Solutions, Vistium, AssessIT™ and First Floor Network Central

Server Availability Manager

Provides network monitoring and alert capabilities for Microsoft Windows NTS environments

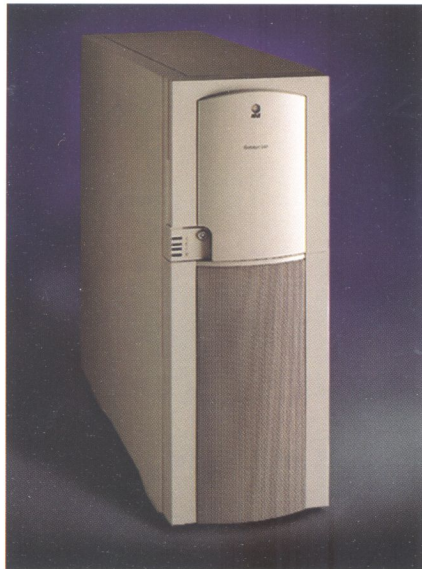
Server Monitor Software

Provides accurate diagnosis of operating system and hardware conditions for Novell NetWare environments

AT&T Global Support Center

Ensures immediate response to system and software issues

AT&T Globalyst™ S40 Server



Powerful networking capabilities and support for the most advanced computing and communications technologies allow the AT&T Globalyst S40 server to meet the needs of today's networks. Designed for demanding environments requiring super server applications, database management, and LAN consolidation, AT&T created the scalable Globalyst S40 to support from one to four 100 MHz and 133 MHz Intel Pentium processors.

The Globalyst S40 features a dual PCI bus and EISA architecture delivering twice the performance bandwidth as typical bus architectures. To further streamline performance, the Globalyst S40's true symmetrical multiprocessing cache architecture is optimized to manage multiple applications.

Recognizing that today's networking applications require both computing and communications abilities, AT&T designed the S40 with advanced

applications and software that allow integrated voice and data solutions, simultaneous file and application-sharing abilities, call control features, file-management tracking, and network resource mapping. In addition, the Globalyst S40 features advanced server management capabilities. These tools can be used independently or integrated for customized server management functions including fault tolerance, performance tuning, monitoring and analysis capabilities. Features such as ECC memory, RAID levels 0, 1, and 5 and hot-pluggable drives ensure data integrity without system interruption.

Support for a broad range of industry-standard hardware and software allows maximum flexibility in choosing a customized business solution. The AT&T Globalyst S40 supports operating systems such as Novell NetWare and UnixWare, Microsoft Windows NT Server, SCO UNIX, SCO MPX, and IBM OS/2, in addition to AT&T UNIX SVR4 MP-RAS.

Computing and Communications

Provides integrated set of advanced voice and data network communication software

Effective Server Management

Integrated software applications maximize network uptime providing advanced fault resilience

Intelligent Architecture

Dual PCI bus and EISA architecture for high performance in demanding environments

Exceptional Performance

Intel processor power, PCI and EISA, and true symmetrical multiprocessor optimized cache architecture

Reliability and Availability

ECC Dataguard memory, hot-pluggable drives, and RAID ensure system uptime

Open Systems Compatibility

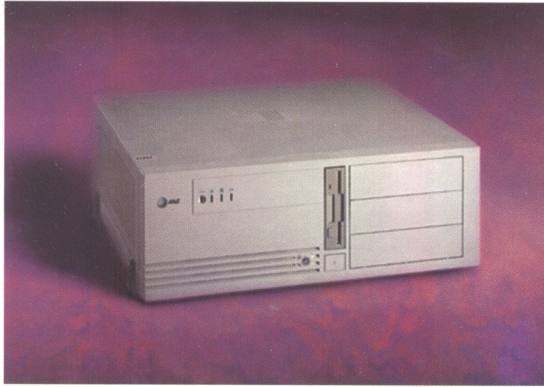
Support for industry-standard hardware and software

Features

Benefits

Features	Benefits
Support for up to 768 MB ECC RAM	Ensures data integrity and system uptime
Eight I/O slots - 4 EISA, 2 PCI, and 2 shared slots	Supports a wide array of standard industry peripherals for superior configuration flexibility
True symmetrical multiprocessing: private two-way set associative, write-back, zero wait state caches on each processor, 512 KB or 1 MB	Eliminates cache bottlenecks and ensures streamlined system performance
PC&C Software	Provides advanced networking software, including AT&T's Passageway Telephony Services Solutions, Vistium, AssessIT™ and First Floor Network
Server Availability Manager	Provides network monitoring and alert capabilities for Microsoft Windows NTS environments
Server Monitor Software	Provides accurate diagnosis of operating system and hardware conditions for Novell NetWare environments
AT&T Global Support Center	Ensures immediate response to system and software issues

AT&T 3404 Desktop Server



The AT&T 3404 desktop server delivers the most competitively priced Intel Pentium processor-based desktop server in the LAN file and print application server industry. The AT&T 3404 offers a high-performance architecture, scalability for investment protection, and compatibility with industry-standard software and hardware.

The AT&T 3404 offers superior scalability by supporting 60 MHz, 75 MHz and 90 MHz Intel Pentium processors, and six drive bays, seven bus mastering I/O slots (4 EISA, 2 PCI, and 1 shared), and a 1 MB cache upgrade option.

The AT&T 3404 takes full advantage of Intel Pentium processor power through a well-designed PCI/EISA architecture. The PCI local bus offers exceptional bandwidth, integration, and higher performance levels than other buses, ensuring streamlined system and peripheral performance. Fast and Wide SCSI-2 further boosts performance by eliminating system bottlenecks.

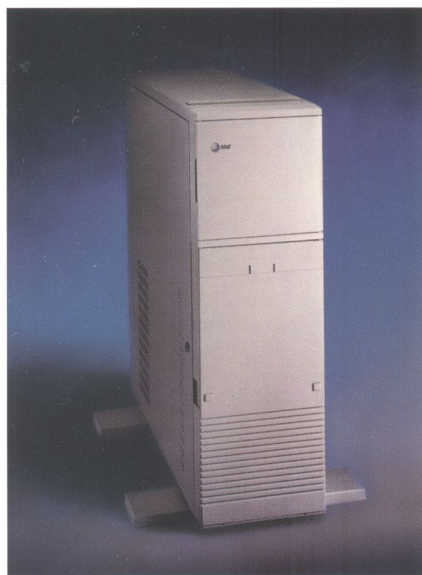
The AT&T 3404 ensures protection of mission critical data by offering features such as Error Checking and Correcting memory and RAID levels 0, 1 and 5.

To facilitate configuration and support, the AT&T 3404 desktop server supports industry-standard operating systems such as Novell NetWare and UnixWare, Microsoft Windows NT Server, SCO UNIX, and IBM OS/2, in addition to AT&T UNIX SVR4 MP-RAS.

Value Price Performance
Exceptional performance, priced competitively
Intelligent Architecture
PCI/EISA architecture for higher bandwidth, higher integration, and maximum peripheral performance
Intel Pentium Processor Power
Supports 60 MHz, 75 MHz and 90 MHz Intel Pentium processors
Reliability and Availability
ECC memory and RAID levels 0, 1 and 5 ensure system uptime
Open Systems Compatibility Support
For industry-standard hardware and software

Features	Benefits
Support for 60 MHz, 75 MHz and 90 MHz Intel Pentium processors	Provides superior scalability and investment protection
PCI/EISA architecture	Provides exceptional bandwidth and performance
Support for up to 128 MB Parity or Error Checking and Correcting RAM	Ensures data integrity and system uptime
256 KB direct-mapped write-back cache optimized for multiple applications, upgradeable to 1MB	Fast I/O response times
Seven I/O slots - 4 EISA, 2 PCI, and 1 shared slot	Supports a wide array of standard industry peripherals for superior configuration flexibility
High Availability options: ECC, RAID levels 0, 1, 5	Provides maximum system reliability and data integrity
AT&T Global Support Center	Ensures immediate response to system and software issues

AT&T 3416 XL Server



Using Intel Pentium processors and high performance symmetrical multiprocessing (SMP) architecture, the AT&T 3416 XL delivers industry-leading price/performance while offering a superior upgrade path. This member of the AT&T server family offers true two-way SMP and high performance uniprocessor configurations as well as hot pluggable drives. The AT&T ServerCentric design ensures superior system responsiveness, availability, and scalability all in an aggressively priced entry-level system.

The AT&T 3416 XL offers industry-leading CPU technology, a unique board architecture, and an EISA bus design to increase bit transfer performance and user flexibility. High performance two-way set associative, zero wait state cache architecture is optimized for scalable concurrency needs of servers.

The AT&T 3416 XL is ideally suited for local area networks requiring Novell NetWare and UnixWare, Microsoft Windows NT Server, SCO UNIX, SCO MPX, IBM OS/2, and AT&T UNIX SVR4 MP-RAS applications.

Features

Benefits

Reliability/Availability

Protects your information assets

Hardware and Software Support

Thousands of engineers located in 120 countries

Outstanding Performance

Improved system responsiveness

Compatibility

Designed for key environments

Aggressively Priced

Pentium processor and superior product quality at competitive prices

DataGuard Error Checking and Correcting Memory (optional)

Provides maximum reliability and data integrity by protecting data and preventing system crashes; increases protection for larger RAM requirements

Hot pluggable disk drives (optional)

Permits replacement of failed component without disruption, and zero downtime

Disk RAID support for levels 0, 1 and 5 (optional)

Maximizes system reliability by minimizing system downtime due to disk failure and loss of data

Choice of 1 or 2 Pentium processors

Matching CPU power to application needs

Independent write-back cache for each processor, 256 KB or 512 KB per processor

Achieves true SMP scalability providing optimum ROI, compared to marginal improvement with shared cache

Certification of leading environments: NetWare, UnixWare Windows NTS, AT&T UNIX SVR4 MP-RAS, SCO UNIX, SCO MPX, OS/2, OS/2 MP

Ensures trouble-free implementation and support

Server Monitor Software

Provides accurate diagnosis of operating system and hardware conditions for Novell NetWare environments

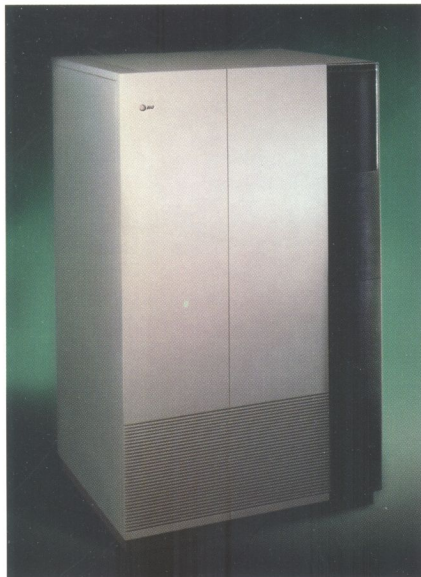
Server Availability Management

Provides network monitoring and alert capabilities for Microsoft Windows NTS environments

AT&T Global Support Center

Ensures immediate response to system and software issues

AT&T WorldMark™ 3500/3500-XP Servers



The **WorldMark 3500** family delivers mainframe class performance for OLTP and Decision Enabling applications in corporate and regional datacenter environments. Coupled with AT&T software, third party software, networking, integration services and support services, the **WorldMark 3500** represents a superior value proposition for customers worldwide. The **WorldMark 3500** family provides superior price/performance, reliability, availability, and serviceability (RAS), and customer investment protection.

With the release of the **WorldMark 3500-XP**, AT&T has taken superior symmetrical multiprocessing (SMP) architecture and made it even better.

The **WorldMark 3500-XP** enhances your ability to move and use

information in business critical environments.

The **WorldMark 3500-XP** offers significant performance enhancements through several key technologies: a new processor board supporting up to four processors per board, increased cache, disconnect memory, a smarter scheduling algorithm, and a faster SCSI controller.

With AT&T's LifeKeeper software, supported by AT&T UNIX SVR4 MP-RAS, the **WorldMark 3575** and **WorldMark 3575-XP** Fault Resilient Servers provide superior availability, clustering scalability and high performance. The **WorldMark 3575** and **WorldMark 3575-XP** are well-suited for mission critical environments.

Superior Performance

Scaling to sixteen Pentium processors and 4 GB EDAC Memory

Superior Investment Protection

Allowing customers to add computing power as needs grow

Superior Availability

Offering hot-pluggable disk drives and fans, redundant power supplies, power fail recovery, and a diagnostic subsystem

Superior Enterprise Solutions and Services

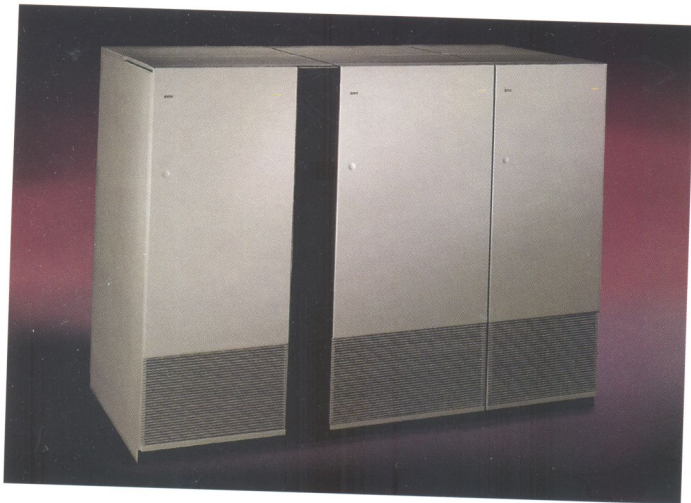
Combining the AT&T midrange servers with other AT&T and third party software, networking, integration services and support services

Features

Benefits

AT&T's SMP Design Dual 64-bit System Bus Dual Ported two-way interleaved memory (four-way on XP models)	Superior performance, throughput (400 MB/second peak bus transfer rate), and processing scalability
1-16 Intel Pentium Processors; up to 4 GB EDAC RAM; up to 56 internal disk/storage drive bays	In-box expansion, delivering superior performance growth
Micro Channel Enhanced bus architecture with up to sixteen expansion slots; 80 MB/second bus transfer rate	High performance bus provides flexibility and expandability, supporting a wide range of SCSI devices, LAN, WAN and TTY terminals
Hot pluggable fans and disks, power fail recovery, redundant power supplies (options on WorldMark 3525 and WorldMark 3525-XP)	High availability; on-line repair; power recovery ensures data integrity and rapid restoration of normal operations
Optional Internal RAID	High-performance, high capacity storage and data redundancy
WorldMark 3575 and WorldMark 3575-XP : LifeKeeper FRS Cluster Ready	Packaged fault resilience, high availability, improved performance
Supports AT&T UNIX SVR4 MP-RAS and Windows NT Server	Choice of the most popular open system operating environments

AT&T WorldMark™ 3600/3600-XP Servers



Combining superior performance, unprecedented scalability, parallel relational database capabilities, and an open computing environment, the **WorldMark 3600** is a high-end enterprise server uniquely designed to meet the demands of today's commercial enterprise. The **WorldMark 3600** massively parallel

computing system is ideal for commercial complex transaction processing and decision support environments.

Using industry-leading technology, the **WorldMark 3600** couples hundreds of powerful Intel Pentium and i486 processors in a single MPP system configuration. To meet the most

demanding performance requirements, the **WorldMark 3600** implements a relational database model using a parallel processing approach. Rather than managing your data within a single processing node, the **WorldMark 3600** distributes tasks to many processing nodes. The linear scalability of the **WorldMark 3600** allows workload throughput to increase as the number of processing nodes are increased.

With the **WorldMark 3600** server's highly scalable architecture, you can expand your computing power incrementally as your business grows. Unlike mainframe computing, where growth in processing power means installation of a large upgrade or another very expensive mainframe, the **WorldMark 3600** allows you to expand your system incrementally whether you are adding more power to accommodate natural business growth, new users, or increased database capacity.

Features

Benefits

Uses AT&T midrange server SMP node hardware and software	Accrues all the benefits of AT&T's industry leading SMP node technology
Administration Workstation (AWS)	Provides a single system view of all elements of a 3600 system
Redundant/near Fault Tolerant Operations	Ensures maximum system availability, keeping your business running
Disk Subsystem supporting RAID technology or independent SCSI disks	The disk subsystem can be used to accommodate data storage of greater than 2 Terabyte per system
YNET - Dual redundant 24 MB/second MPP system interconnect	Provides the backbone for the loosely coupled MPP system architecture
Supports Teradata® Database, Oracle Parallel Server™ and SYBASE Navigation Server™	Choose from a variety of relational database capabilities; AT&T provides the solution that best meets your needs

Superior Investment Protection

Allowing customers to add computing power as needs grow

Outstanding Scalability

Up to 64 AP Nodes (1,024 CPUs) interconnected via YNET
Over 350 AMPs supporting the Teradata Database connected via YNET

Superior Availability

The AT&T 3600's parallel architecture and component redundancy provide state-of-the-art reliability and availability

Demonstrated World Leader

For very large database processing for commercial applications

AT&T WorldMark™ 5100S Servers



Exceptional Investment Protection

Rapid, efficient scalability to 32 Intel Pentium processors and next generation Intel processors

Ultimate Scalability

Provides the basic building blocks for larger systems including clusters and massively parallel processing solutions

Powerful SMP Performance

Intel processing power and symmetric multiprocessing with optimized cache architecture

Robust Reliability and Availability

System options ensure data integrity and system availability

Superior Enterprise Solutions and Services

Combining the AT&T WorldMark servers with other AT&T and third party software, networking, integration services and support services

The **WorldMark 5100S** server is the Symmetrical Multiprocessing (SMP) member of the

WorldMark Series 5000 family of servers. Using a modular cabinet, a series of "subsystems," and the most advanced system technology, the **WorldMark 5100S** server offers exceptional price/performance and investment protection through a unique design that provides the ultimate in system scalability.

The **WorldMark 5100S** server uses one of the fastest open system SMP designs ever benchmarked, maximizing potential for your most demanding mission critical applications. The **WorldMark 5100S** server starts with a single SMP processor subsystem (node) and maintains that same platform as your information processing needs change.

Unprecedented processing power and processor scalability are attained through the **WorldMark 5100S** server's support of 4 to 32 90 MHz or 133 MHz Intel Pentium processors within a single processor subsystem. The **WorldMark 5100S** server will

also support the next generation Intel processor family, enabling even greater processing performance.

Along with the performance and scalability advantages gained with the **WorldMark 5100S** server, this system also offers outstanding availability, reliability, and serviceability through many features, including:

- Hot swappable and hot addable disk drives, hot swappable power supplies, batteries, and fans
- Optional redundant battery backup
- Redundant power supplies and fans

While the **WorldMark 5100S** is the foundation for many departmental or small enterprise information solutions, it also serves as the basic building block for clusters and MPP solutions. Multiple node systems are constructed with the **WorldMark 5100** server's common processor subsystem as the foundation in these solutions: AT&T LifeKeeper Switchover, Oracle Parallel Server Clusters, and MPP configurations for Teradata and other merchant databases.

Features

Benefits

Features	Benefits
Support for 4 to 32 90 MHz or 133 MHz Intel Pentium processors	Provides superior performance and scalability
Support for Intel's next generation processor family	Enables the system to scale to even greater processing performance
4 MB second level cache per processor and 32 MB Limited Address Range Cache per processor board	Eliminates cache bottlenecks and ensures streamlined system performance
Disconnect memory board supporting up to 4 GB ECC memory with 2/4-way interleaving	Reduces system bus contention and maximizes system performance scalability; ensures data integrity
Internal Disk Subsystem supporting up to 40 drives and 160 GB disk storage	In-box expansion as system's storage requirement grows
Internal uninterruptible power, redundant power supplies, optional redundant battery backup	Ensures system uptime

AT&T WorldMark™ 5100C Servers



As you continue to perform more of your vital processing on open systems, you require a system that is available, often 24 hours a day, able to grow, and easy to manage. The **WorldMark 5100C** server, the clustered member of the **WorldMark Series 5000** family of servers, meets all of these requirements. The **WorldMark 5100C** offers exceptional availability, performance, manageability and investment protection through a unique scalable system design that is compatible with other AT&T LifeKeeper clustered systems.

The **WorldMark 5100C** server uses the same processor subsystem (node) found in the **WorldMark 5100S**, providing the same performance, in-box scalability and high availability features. We then add the clustering and fault resilient capabilities of AT&T LifeKeeper to the system along with the Administration Workstation (AWS), an innovative systems management solution which provides a single point of control of your

configuration, no matter how many **WorldMark** nodes you decide to employ. Finally, we add to this the ability to quickly, easily and inexpensively grow the system into a Massively Parallel Processing (MPP) architecture. The **WorldMark 5100C** clearly stands out as a system that provides outstanding investment protection and flexibility in a complete platform-level solution.

AT&T LifeKeeper FRS, an integral part of the **WorldMark 5100C** server, is a clustering software solution which can be employed with Oracle Parallel Server to enable users to have simultaneous access to databases and shared applications. It can also be employed with other merchant databases to provide high availability. Up to eight processor subsystems can be joined in a single cluster to provide a cost-effective means of increasing performance and ensuring high data availability.

Exceptional Investment Protection through System Scalability

Provides the basic building blocks for larger systems, clustering up to 8 processor subsystems and scalable to MPP solutions

High Availability and Performance

Clustering provides consistent uptime and high performance

Easy to Manage

AWS allows a single operational view and provides effortless monitoring of the entire system

Powerful SMP Performance

Intel processing power and symmetric multiprocessing with optimized cache architecture

Superior Enterprise Solutions and Services

Combining the AT&T **WorldMark** servers with other AT&T and third party software, networking, integration services and support services

Features

Benefits

Uses **WorldMark 5100S** processor subsystem as foundation

Accrues benefits of AT&T's industry leading SMP technology and provides superior investment protection

Clustering of 2 to 8 processor subsystems

Provides a cost-effective means of increasing performance and ensuring data availability

Administration Workstation (AWS)

Provides a single point of system administration and management for the entire clustered system; allows easy monitoring of processor and disk subsystems

Automatic system recovery and automatic user and application switchover

Provides failure protection for the processor subsystems and ensures maximum data availability and integrity

AT&T LifeKeeper Distributed Lock Manager (DLM)

Provides fault detection and data lock management of critical applications

Internal uninterruptible power, redundant power supplies, optional redundant battery backup

Ensures system uptime

AT&T WorldMark™ 5100M Servers



Exceptional Investment Protection through System Scalability

Provides the building blocks to enable up to 16 processor subsystems (nodes) and up to 512 processors in an MPP solution

High Availability

Parallel architecture and component redundancy provide superior reliability and availability

Maximum Performance

Intel processor power, parallel processing, and high speed BYNET interconnect

Easy to Manage

AWS allows a single operational view and provides effortless monitoring of the entire system

Superior Enterprise Solutions and Services

Combining the AT&T WorldMark servers with other AT&T and third party software, networking, integration services and support services

The **WorldMark 5100M** server is the Massively Parallel Processing (MPP) member of the

WorldMark Series 5000 family of servers. Using a modular cabinet, a series of "subsystems," and the most advanced interconnect technology, the **WorldMark 5100M** server offers exceptional performance, availability and investment protection for your most advanced and critical information processing environments. These environments include decision support, data warehousing and enterprise-wide mission critical online complex transaction processing (OLCP).

To meet your most demanding performance requirements, the **WorldMark 5100M** server implements a relational database model using the parallel processing approach. Rather than managing your data within a single processor subsystem (node), the **WorldMark 5100M** distributes tasks to many processor subsystems. The linear subsystem scalability of the **WorldMark 5100M** allows workload throughput to increase as you increase the number of processor subsystems.

The parallel processing performance provided by the **WorldMark 5100M** server coupled with the industry's

leading databases, brings you outstanding information solutions. The **WorldMark 5100M** supports Teradata Database solutions and mixed configurations consisting of Teradata and merchant databases, including: Oracle Parallel Server, SYBASE Navigation Server and INFORMIX OnLine Dynamic Server™ XPS solutions.

The AT&T scalable BYNET™ Interconnect is the key ingredient for multiple processor subsystems to work as a team to enable the largest commercial databases in the world. A fault resilient high performer, BYNET provides an interconnection network that enables multiple processor subsystems to communicate in a high-speed, loosely coupled design. The BYNET network bandwidth scales linearly, providing unparalleled database connectivity and power for growth.

With the **WorldMark 5100M** server's highly scalable architecture, that uses the **WorldMark 5100S** server's processor subsystem as its foundation, you can expand your system incrementally, easily accommodating natural business growth, new users, new applications or increased database capacity.

Features

Benefits

Uses WorldMark 5100S processor subsystem as foundation	Accrues benefits of AT&T's industry leading SMP technology and provides superior investment protection
Dual redundant BYNET Interconnect	Enables the interconnection of 16 processor subsystems in a single MPP system; provides high performance and reliability
Administration Workstation (AWS)	Provides a single point of system administration and management for the entire MPP system
Redundant power supplies, battery backup, fans and MPP network, as well as internal uninterruptible power	Ensures system uptime
Supports Teradata Database, Oracle Parallel Server, SYBASE Navigation Server and INFORMIX OnLine Dynamic Server XPS	Choose from a variety of relational database capabilities; AT&T enables the solution that best meets your needs

Operating Environments

AT&T Global Information Solutions is committed to helping you get, move and use information in your enterprise computing solutions. Through your choice of industry accepted operating systems - AT&T UNIX SVR4 MP-RAS, Microsoft Windows NT, SCO UNIX, IBM OS/2, Novell NetWare, or Novell UnixWare - you can implement the ideal operating environment for your business needs.

AT&T UNIX SVR4 MP-RAS

AT&T UNIX SVR4 MP-RAS is designed specifically for mission-critical applications with large numbers of users. Widely recognized as the most robust and open operating system for business critical computing, AT&T UNIX SVR4 MP-RAS lives up to its name by delivering unprecedented reliability, availability and serviceability (RAS). System performance is closely linked to the AT&T server family, with broad base support from desktops to massively parallel processing.

AT&T UNIX SVR4 MP-RAS 3.0, the newest version of AT&T Global Information Solution's UNIX operating system, is compatible with Novell's UnixWare 1.1 operating system. Applications running on Novell's UnixWare 1.1 will also run on AT&T UNIX SVR4 MP-RAS 3.0 while retaining the look and feel of UnixWare. SCO applications certified to run on UnixWare 1.1 will also be compatible with AT&T UNIX SVR4 MP-RAS 3.0. AT&T UNIX SVR4 MP-RAS is sold by AT&T and AT&T authorized resellers.

Microsoft Windows NT

Designed for client/server computing, Microsoft Windows NT's performance, scalability, reliability, and ease of use makes it the right choice for a variety of server applications, including business applications, database applications, and file/print. As a co-developer of the symmetrical multiprocessing (SMP) version of Windows NT, AT&T Global Information Solutions is uniquely qualified to deliver and support Windows NT. Microsoft Windows NT is sold by AT&T and by AT&T authorized resellers. Only AT&T's version of Windows NT is supported on AT&T's servers configured with greater than four processors.

SCO UNIX

SCO UNIX is a popular UNIX environment for application processing. SCO UNIX offers symmetrical multiprocessing and several interoperability options including TCP/IP, IPX/SPX, and LAN

Manager for UNIX. SCO UNIX is sold by AT&T and AT&T authorized resellers.

Novell NetWare

Novell NetWare is the most widely used server network operating system. NetWare provides high-performance sharing of distributed resources. NetWare is sold by AT&T authorized resellers.

Novell UnixWare

Novell UnixWare Application Server combines the application processing capabilities of UNIX with the strong interoperability of Novell NetWare. UnixWare is sold by AT&T authorized resellers.

IBM OS/2

OS/2, when combined with IBM LAN Server, provides a platform for application processing and distributed resource sharing on several AT&T servers. OS/2 products are sold by AT&T authorized resellers.



Operating Systems

Benefits

AT&T UNIX SVR4 MP-RAS,
Microsoft Windows NT

RAS: fault management & on-line serviceability
Performance and scalability
Systems management
Security

SCO UNIX,
Novell NetWare,
Novell UnixWare,
IBM OS/2

Consistency across multiple vendor platforms
Time-to-market on new AT&T Servers
Breadth of available applications

AT&T Server Enabling Software

AT&T OneVision™

AT&T OneVision is a complete environment for building and delivering end-to-end enterprise management solutions. OneVision builds on a foundation of industry-standard platform technology, supports a comprehensive range of integrated applications, and goes on to leverage the platform and applications to craft full-function solutions for customers – solutions that include management services as well as turnkey systems.

AT&T's OneVision foundation is built on the industry's leading platform technology – HP OpenView. By building on OpenView, OneVision customers have access to a broad selection of applications, improved interoperability with existing management stations, and have a robust platform for integrating applications across distributed consoles.

AT&T OneVision applications encompass a remarkably broad range of technologies, from desktop administration and software distribution to the management of PBXs and Wide Area Network (WAN) services. OneVision applications are drawn from across AT&T business units and best-of-class ISVs.

AT&T LifeKeeper Fault Resilient Systems (FRS)

AT&T LifeKeeper FRS is a middleware solution that allows you to link two or more AT&T servers together to share key application data. By providing independent access to a shared database and files, if one system goes down, another assumes ownership of the application and associated data, and continues processing. Based on open systems and industry standards, LifeKeeper FRS offers the most advanced fault resilience for critical business applications.

LifeKeeper FRS addresses your need to avoid costly downtime associated with *Normal Commercial Availability* offerings ("out of box" availability features that are built into the system) and *High Availability* offerings (use of redundant hardware and/or software features). AT&T LifeKeeper FRS also allows you to avoid the high price and lower performance associated with a fault tolerant system.

LifeKeeper FRS complements the high availability capabilities of our AT&T servers, enabling business solutions to incorporate near fault tolerant capabilities at a lower price.

AT&T LifeKeeper FRS Clusters

AT&T LifeKeeper FRS Clusters combine the recovery features of LifeKeeper FRS with the data sharing capabilities provided by the ORACLE Parallel Server and cluster management from AT&T's LifeKeeper Distributed Lock Manager (DLM). AT&T LifeKeeper FRS Clusters work with ORACLE Parallel Server to allow you simultaneous access to databases and shared applications.

AT&T LifeKeeper FRS Clusters enhances cluster configurations through greater flexibility, increased performance, improved user interfaces and application recovery, providing a cost-effective solution that ensures data availability.

TOP END

TOP END middleware is one of AT&T's strategic technologies designed for the development, deployment and management of business critical applications. TOP END is a layer of software that recognizes the myriad of network protocols and message formats associated with heterogeneous environments, shielding application developers from these complexities so they can focus on business needs.

TOP END's handling of network connections also enables seamless connection of enterprise computing components. TOP END provides the most comprehensive tools available to centrally manage the unified system.

TOP END runs on a variety of platforms and is quickly being recognized as best-in-class in key areas such as administration, scalability, and on-line transaction processing. With TOP END middleware,

- users have reliable access to information and services regardless of their location in the enterprise
- application developers have the ability to quickly and easily develop applications
- systems administrators have the ability to cost effectively manage the enterprise-wide environment

AT&T NETVAULT

AT&T NETVAULT is a scalable tape storage management software solution that addresses the pressing need for reliable storage and archival management of data residing within UNIX and Windows NT network environments. Combined with support for industry-leading tape storage devices – from internal QIC systems to external tape libraries – the AT&T NETVAULT solutions provide comprehensive setup, scheduling, recovery, maintenance and tracking of all backup and restore processes by way of a friendly, versatile graphical interface.

AT&T Enterprise Messaging

AT&T's Enterprise Messaging middleware solution is a robust, electronic messaging infrastructure that transports critical business information, packaged in many formats, securely and reliably among people and systems distributed worldwide. It integrates products from AT&T's best-in-class technology partners to provide you with complete messaging solutions that include Electronic Data Interchange (EDI), voice messaging, systems management and administration, workflow, wireless access and electronic forms.

Built on industry-standard X.400 and X.500 technology components, AT&T Enterprise Messaging integrates with electronic mail, electronic commerce, and multi-media message formats that include voice/text integration, video and fax services.

AT&T Enterprise Messaging is a superior premises-based, client/server messaging solution. It is a scalable solution that can serve a large, multi-server, multi-site messaging enterprise, enabling transparent access and movement of information across a variety of different computing environments.

AT&T Enterprise Messaging middleware contains integrated product components grouped under Messaging, Directory and Client Services.

- **Messaging Services** manage, route and deliver messages among people and applications on the messaging network.
- **Directory Services** enable your business to get, move and use information located in distributed locations worldwide, all from a single graphical user interface.
- **Client Services** transparently link you with your trading partners and business associates worldwide via a full suite of messaging and directory services.

Features

Benefits

OneVision

Industry-Standard Platform
Technology Expertise

Ability to deliver solutions that address specific customer requirements, including distributed UNIX and Windows NT system environments

Broad Range of Technologies

Provides comprehensive, scalable, robust management solutions from desktop administration and software distribution to the management of PBXs and WAN services

LifeKeeper

Automatic Recovery

Reduces costly downtime

Data Protection

Sets locks on shared disk to prevent data corruption

Multi-Directional Switchover

Multiple systems act as backups to other designated systems within the configuration

TOP END

Blending of Heterogeneous Platforms

Makes services, data on any processor accessible from anywhere

Load Balancing

Provides high performance and throughput; enables possible postponement of hardware purchases required to cure performance problems

Global Administration

Affords consistent, centralized control while reducing labor cost

NetVAULT

Customized Backup and Restore Jobs for Any Combination of Multiple Files, Directories, or Network Servers

Allows system administrators flexibility to design and manage a storage solution unique to the needs of the enterprise

Wide Range of Storage Media Support: tape library systems, 8mm tape, QIC tape, DAT and DLT

Protects storage media and tape peripheral investments

Wide Range of Client Support: AT&T, Sun, HP, IBM, DEC, Silicon Graphics, Pyramid

Offers multi-vendor support in interoperating environments

Messaging

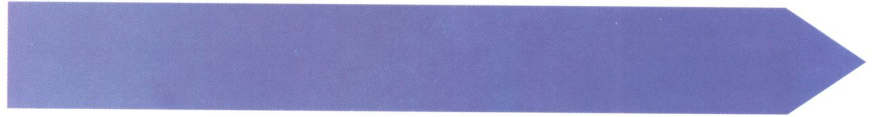
Electronic Messaging Infrastructure

Protects business critical information

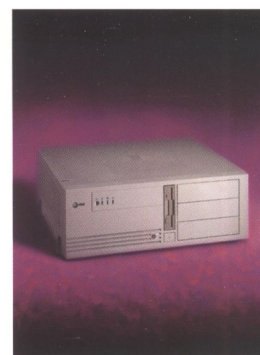
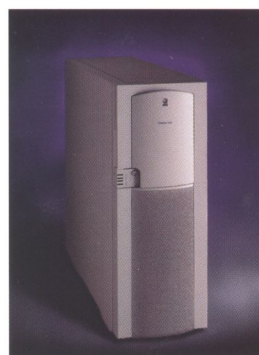
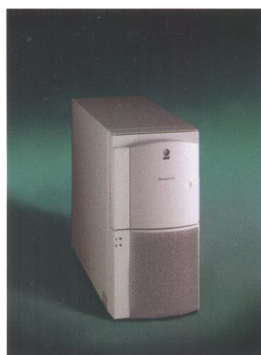
Open Systems Architecture

Integrates industry-standard products from AT&T's best-in-class technology partners to provide complete messaging solutions

AT&T Server Family Feature Foldout



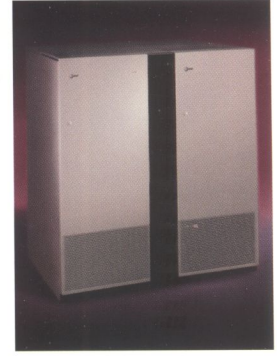
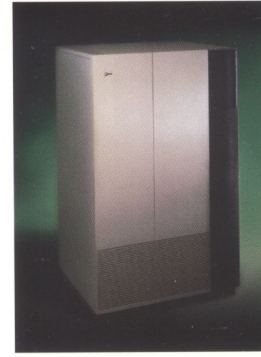
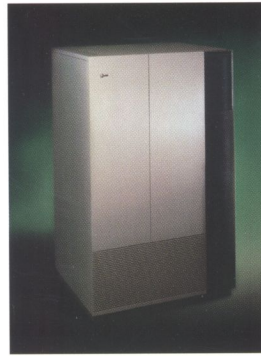
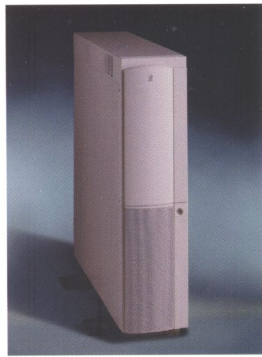
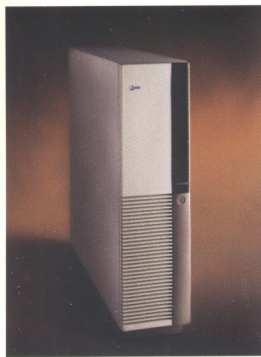
AT&T Server Products



AT&T Model	Globalyst S10	Globalyst S40	3404	3416 XL
Physical Specifications				
Cabinet Type	Underdesk	Underdesk	Desktop	Underdesk
Processor Subsystems per cabinet	n/a	n/a	n/a	n/a
Size (HxWxD)	40.1cm x 19.1cm x 44.5cm (15.8in x 7.5in x 17.5in)	62.8cm x 24.1cm x 69.2cm (24.7in x 9.5in x 27.2in)	16.3cm x 43.2cm x 41.9cm (6.4in x 17.0in x 16.5in)	57.0cm x 18.0cm x 59.0cm (22.4in x 7.0in x 23.2in)
Weight	9.6 kg (21.1 lbs)	34.1 kg (75 lbs)	7.5 kg (16.5 lbs)	24.75 kg (55 lb)
Processor				
Type	Intel Pentium	Intel Pentium	Intel Pentium	Intel Pentium
Speed (MHz)	60/75/90	100/133	60/75/90	60/90/dual 66
Processors	1	1-4	1	1-2
Cache per CPU	256KB Std./1MB opt	Monadic: 512KB; Dyadic: 1MB each	256KB Std/1MB Opt	256KB/512KB
Bus Architecture				
I/O Bus architecture	PCI/EISA, F/W SCSI-2	Dual PCI Peerbus/EISA, F/W SCSI-2	PCI/EISA, F/W SCSI-2	EISA, SCSI-2
Bus transfer rate	EISA: 33MB/sec PCI: 132MB/sec	EISA: 33MB/sec PCI: 132MB/sec	EISA: 33MB/sec PCI: 132MB/sec	33MB/sec
Memory Specifications				
Memory range/type	0-128MB Parity or ECC	0-768MB ECC	0-128MB Parity or ECC	0-384MB ECC or Parity
Speed(ns)	70-80	70-80	70-80	70-80
Interleave memory	64-bit Multiplex	64-bit Multiplex	64-bit Multiplex	64-bit Multiplex
System Configuration				
Available Expansion Slots	7 Total: 4 EISA/2 PCI/1 shared	8 Total: 4 EISA/2 PCI/2 shared	7 Total: 4 EISA/2 PCI/1 shared	8 Total: All 32-bit EISA
Internal flex disk	3.5" 1.44MB	3.5" 1.44MB	3.5" 1.44MB	3.5" 1.44MB
Available Bays (HH/FH)	6HH	4HH, 6FH Hot-Pluggable	5HH	3HH/7FH (Hot Plug Option)
Internal Fixed Disk Options	1GB, 2GB, 2GB Wide	1GB, 2GB, 4GB Wide	1GB, 2GB, 2GB Wide	1GB, 2GB, 4GB
Internal Fixed Disk Capacity	12GB	24GB	10GB	40GB
External Fixed Disk Capacity	Up to 84GB	Up to 84GB	Up to 84GB	Up to 112GB
Internal Tape Options	2/4GB DAT, 4/8GB DAT, 1GB QIC, 7/14GB 8mm	4-8GB DAT DDS-2, DAT Autochanger, 20GB DLT, 1GB SCSI QIC, 7-14GB 8mm	2/4GB DAT, 4/8GB DAT, 1GB QIC, 7/14GB 8mm	2/4GB DAT, 4/8GB DAT, 1GB QIC, 7/14GB 8mm
CD-ROM	5.25"HH 600MB Quad-Spin	5.25"HH 600MB Quad-Spin	5.25"HH 600MB Quad-Spin	5.25"HH 600MB Quad-Spin
Disk Array Options	Internal or External	Internal or External	Internal or External	Internal or External
Power				
Power Fail Recovery	Optional	Optional	Optional	Optional
UPS	External	External	External	External
Rec.Implementation	Orderly Shutdown	Orderly Shutdown	Orderly Shutdown	Orderly Shutdown
Power Supply	200 Watt	525 Watt	200 Watt	350 Watt
Operating Environments*				
MS-DOS	Yes	No	Yes	Yes
SCO UNIX	Yes	Yes	Yes	Yes
AT&T UNIX SVR4 MP-RAS	Yes	Yes	Yes	Yes
OS/2	Yes	Yes	Yes	Yes
Windows NTS	Yes	Yes	Yes	Yes
Netware 3.12, 4.1	Yes	Yes	Yes	Yes
UnixWare 1.1/2.0	Yes	Yes	Yes	Yes
Server Enabling Software				
LifeKeeper	No	Planned	No	No
OneVision	Yes	Yes	Yes	Yes
TOP END	Yes	Yes	Yes	Yes
NetVault	Yes	Yes	Yes	Yes

* If an operating environment is MP capable, then it is supported on the MP versions of AT&T servers.

** Limited configuration.



**WorldMark 3455/3455-XP
WorldMark 3475/3475-XP**

**WorldMark 4100S/
WorldMark 4100C/
WorldMark 4150S**

WorldMark 3525/3525-XP

**WorldMark 3555/3555-XP
WorldMark 3575/3575-XP**

WorldMark 3600/3600-XP

Desktop n/a 73.7cm x 19.1cm x 82.6cm (29in x 7.5in x 32.5in) 68.0 kg (150 lb) fully config.	Desktop n/a 81cm x 19.1cm x 82.6cm (32in x 7.5in x 32.5in) 79.4 kg (175 lb) fully config.	Floorstanding n/a 142cm x 86cm x 71cm (56in x 34in x 28in) 499 kg (1100 lb) fully config.	Floorstanding n/a 142cm x 86cm x 71cm (56in x 34in x 28in) 499 kg (1100 lb) fully config.	Floorstanding n/a 142cm x 66cm x 91cm (56in x 26in x 36in) per cabinet 593 kg (1310 lb) per cabinet
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Intel Pentium
66/90/133
1-6/1-8
256KB/2MB and 4MB/2MB

Intel Pentium
90/133
2-8/ 4-8/ 2-8
2MB

Intel Pentium
66/90/133
1-8/1-16
256KB/2MB and 4MB

Intel Pentium
66/90/133
2-8/2-16
8MB/4MB+32MB LARC

Intel Pentium
66/90/133
2-8/2-16
8MB/4MB+32MB LARC

MC-E, SCSI-2

MC-E, SCSI-2

MC-E, F/W SCSI-2

MC-E, F/W SCSI-2

MC-E, SCSI-2

80MB/sec

80MB/sec

80MB/sec

80MB/sec

80MB/sec

64MB-2GB ECC
80
2-way or 4-way

64MB-2GB ECC
80
2-way or 4-way

64MB-4GB ECC
80
2-way or 4-way

64MB-4GB ECC
80
2-way or 4-way

64MB-2GB ECC
80
2-way or 4-way

7 Total: All 32 Bit

7 Total: All 32 Bit

8 Total: All 32 Bit

16 Total: All 32 Bit

8 Total/AP: All 32 Bit

3.5" 1.44MB
9HH/5FH
2GB, 4GB
36GB
Up to 3TB
1GB QIC
2-8GB (4mm DAT)
7-14GB (8mm), 10-20 (DLT)
600MB
Internal or External

3.5" 1.44MB
9HH/5FH (Hot Plug on 4150S)
2GB, 4GB
36GB
Up to 3TB
1GB QIC
2-8GB (4mm DAT)
7-14GB (8mm), 10-20 (DLT)
600MB
Internal or External

3.5" 1.44MB
28HH, 14FH
2GB, 4GB
224GB
Up to 3TB
1GB QIC
2-8GB (4mm DAT)
7-14GB (8mm), 10-20 (DLT)
600MB
Internal or External

3.5" 1.44MB
56HH, 28FH
2GB, 4GB
224GB
Up to 3TB
1GB QIC
2-8GB (4mm DAT)
7-14GB (8mm), 10-20 (DLT)
600MB
Internal or External

3.5" 1.44MB or 1.3MB
2FH+external
2GB, 4GB
12GB (AP)
Up to 3.5TB
7-14GB (8mm), 10-20 (DLT)
600MB
External

Optional
Internal
Full Recovery
720 Watt

Optional (Standard on 4150S)
Optional (Standard on 4150S)
Full Recovery
720 Watt

Optional
Internal
Full Recovery
2000-4000 Watt

Standard
Internal
Full Recovery
2000-4000 Watt

Standard
Internal
Full Recovery
2000-4000 Watt

No
No
Yes
No
Yes (not w/3475)
No
No

No
No
Yes
No
Yes (not w/4100C)
No
No

No
No
Yes
No
Yes
No
No

No
No
Yes
No
Yes (not w/3575)
No
No

No
No
Yes
No
No
No
No

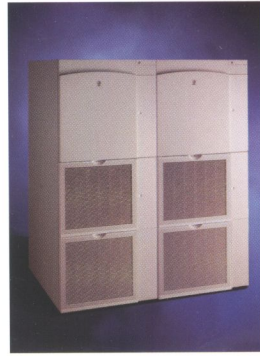
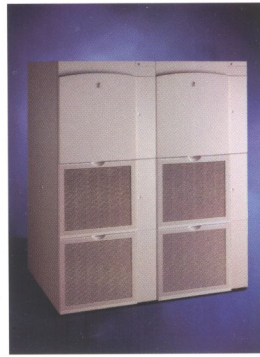
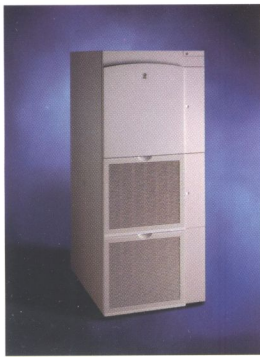
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes



WorldMark 5100S	WorldMark 5100C	WorldMark 5100M
Floorstanding 1 183cm x 76cm x 102cm (72in x 30in x 40in) per cabinet 422 kg (930 lb) per cabinet	Floorstanding 1 or 2 183cm x 76cm x 102cm (72in x 30in x 40in) per cabinet 499 kg (1100 lb) per cabinet	Floorstanding 1 or 2 183cm x 76cm x 102cm (72in x 30in x 40in) per cabinet 499 kg (1100 lb) per cabinet
<u>Data in this section for the 5100S, 5100C and 5100M are shown per processor subsystem</u>		
Intel Pentium 90/133 4-32 4MB+32MB LARC	Intel Pentium 90/133 4-32 4MB+32MB LARC	Intel Pentium 133 4-32 4MB+32MB LARC
MC-E, F/W SCSI-2	MC-E, F/W SCSI-2	MC-E, F/W SCSI-2
80MB/sec	80MB/sec	80MB/sec
<u>Data in this section for the 5100S, 5100C and 5100M are shown per processor subsystem</u>		
64MB-4GB ECC 80 2-way or 4-way	64MB-4GB ECC 80 2-way or 4-way	64MB-4GB ECC 80 2-way or 4-way
16 per processor subsystem All 32 Bit 3.5" 1.44MB 40HH disks, 6HH tape/CD 2GB, 4GB 160GB Up to 10TB 1GB QIC 4-8GB (4mm DAT) 7-14GB (8mm) 600MB External	16 per processor subsystem All 32 Bit 3.5" 1.44MB 8HH tape/CD n/a external storage only Up to 10TB 1GB QIC 4-8GB (4mm DAT) 7-14GB (8mm) 600MB External	16 per processor subsystem All 32 Bit 3.5" 1.44MB 8HH tape/CD n/a external storage only Up to 10TB 1GB QIC 4-8GB (4mm DAT) 7-14GB (8mm) 600MB External
Standard Internal Full Recovery Up to 6000 Watt	Standard Internal Full Recovery Up to 6000 Watt	Standard Internal Full Recovery Up to 6000 Watt
No No Yes No Planned No No	No No Yes No Planned No No	No No Yes No Planned No No
Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes



as products as new
ents become available.
Solutions, therefore,
ge specifications without

1 operations described
ed by AT&T in all parts
r AT&T representative or
information.

nes appearing in this
ademarks or trademarks
. Pentium and i486 are
ration. Windows NT is a
orporation. VGA, Micro
lemarks of International
ration. SCO is a
nta Cruz Operations.
e trademarks of Novell.
mark in the United
, licensed exclusively
y, Limited. LifeKeeper
rks and TOP END is a
F&T Global Information
'ision is a trademark of
Move It Use It" is a
i registered trademark of
Solutions Company.